UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

June 8, 2005

Dr. Janis Cooke
Central Valley Regional Water Quality Control Board
11020 Sun Center Drive #200
Rancho Cordova, CA 95670'

Dear Dr. Cooke:

Thank you for the opportunity to review and comment on the Amendments to The Water Quality Control Plan for the Sacramento River and San Joaquin River Basins For The Control of Mercury in Cache Creek, Bear Creek, Sulphur Creek and Harley Gulch, Staff Report, Public Review Draft Report, dated May 2005. We reviewed the proposed actions to determine whether they are consistent with applicable federal regulations concerning water quality standards and TMDLs. This letter provides our comments.

We appreciate the Regional Board's very hard work and careful analyses to develop this report. We fully recognize the complexity of mercury water quality standards and mercury cycling in the environment, and the difficulty in controlling sources of mercury loadings to these water bodies. We commend your work on both the proposed water quality objectives and on the proposed TMDLs included in this Staff Report and supporting documents.

Comment #1: Mercury Offset Program and Alternative Load Allocations

We support your goal of setting up a workable mercury offset program, and we support the language currently contained in the draft Basin Plan Amendment at page 13 of the Staff Report. Draft Basin Plan language is included concerning a mercury offset program and alternative load allocations. This language notes that "The framework for offset programs will be developed in future Basin Plan Amendments." In the following paragraph, it states that in order to allow offset proponents to conduct projects within the watershed to reduce loads, "the Executive Officer may consider alternative load allocations that will achieve the objectives." We would like to work closely with you, as you develop a workable framework for offset programs, and as you consider any changes to the load allocations, to ensure that any offset program and alternative allocation schemes meet applicable federal requirements. Any offset program provision and any changes to TMDL allocations in the Basin Plan would need to be submitted to EPA for review and approval.

Comment #2: Water Quality Objectives for Methylmercury Concentrations in Trophic Level 2, 3

and 4 Fish to Protect Human Health and Wildlife Species (Alternative 2 for Cache Creek, Bear Creek, and Harley Gulch)

Section 4 of the Staff Report outlines four alternatives that were considered for water quality objectives for Cache Creek, Bear Creek and Harley Gulch. Board staff recommends Alternative 2. We wholly support the recommendation of Alternative 2 over the other alternatives. Alternative 2 proposes fish tissue concentrations that would adequately protect the WILD beneficial use that applies to these water bodies. In particular, Alternative 2 for Cache and Bear Creeks, protects the federally listed bald eagle, and for Harley Gulch, the kingfisher. This alternative supports human consumption rates of between 22 and 40 g/day for Cache and Bear Creeks. EPA strongly supports water quality objectives that protect human health, as well as federally listed species and other wildlife.

Comment #3: Attainment of MUN Beneficial Use on Sulphur Creek

We are concerned that in its current form, the TMDL for Sulphur Creek does not appear to meet all federal TMDL requirements. Specifically, the Staff Report does not sufficiently demonstrate that the TMDL for Sulphur Creek would result in attainment of applicable mercury water quality standards for the current MUN beneficial use (the CTR 50 ng/l criterion). We expressed this concern in our comment letter dated November 19, 2004 on the Draft Staff Report for the Sulphur Creek TMDL dated August 2004. Based on the information in the Staff Report and the underlying TMDL report, it is our understanding that a numeric target and a clean-up goal exist for the Sulphur Creek watershed: a 0.2 mg/kg dry weight sediment target for non-mineralized zones in the watershed (a natural background/pre-anthropogenic value); and 3 mg/kg dry weight sediment goal for mineralized areas, to be used for the clean-up of the mined areas. Both apply to fine-grained soil.

We note that an allocation for Sulphur Creek of 10% of the existing load (in grams per year of methylmercury) is given in Table IV-8 at page 9 of the Staff Report (proposed Basin Plan language for Chapter IV, Implementation). This corresponds to a 90% reduction of methylmercury in the water body, to 0.8 grams per year of methylmercury, a significant and important reduction. However, it is not clear from the Staff Report whether the CTR total mercury criterion would be attained and maintained after the proposed allocation was achieved through the proposed implementation actions which are designed to achieve reductions in both methylmercury and total mercury.

At section 4.2.8 of the Staff Report at page 38, the discussion states that the MUN beneficial use applies to Sulphur Creek through application of the "tributary rule"as well as through application of State Board Resolution No. 88-63 (SB 88-63). The discussion states that the MUN use is not present in the creek, and that water quality in the creek is a function of inputs from geothermal springs and erosion of naturally occurring mercury-enriched soil. Water quality standards associated with the MUN use for mercury, total dissolved solids and conductivity are

routinely significantly exceeded, due to geothermal spring flows which dominate the water body for significant portions of the year. The discussion points out that SB 88-63 allows exceptions from designation as a drinking water source for water bodies with naturally occurring high TDS and conductivity. The discussion states that the TDS values and conductivity ranges on Sulphur Creek from geothermal inputs greatly exceed the ranges required to qualify for exception. For example, with regard to TDS, SB 88-63 allows exceptions for streams with more than 3,000 mg/l; Sulphur Creek contains TDS values of 7,270 to 17,770 mg/l. The data presented appear to support a plausible argument for an exception for Sulphur Creek from designation as a drinking water source under the Resolution.

Previous discussions with the Regional Board on this issue concluded that removal of the MUN use, regardless of the manner by which it was designated, would require a Basin Plan Amendment demonstrating, under 40 CFR Part 131.10(g), that attainment of the use is not feasible. The regulation at 40 CFR 131.10(g)(1) allows a use that is not existing to be removed if the State can demonstrate that attaining the designated use is not feasible because naturally occurring pollutant concentrations prevent the attainment of the use. Similarly, SB 88-63 allows exceptions from designation as a drinking water source where TDS and conductivity prevent the attainment of the use. It appears staff have sufficient data to support both an analysis pursuant to 40 CFR 131.10(g) to remove the MUN use and an analysis for exception from designation as a drinking water source under SB 88-63.

We suggest the Regional Board clarify its determination with respect to application of the MUN use to Sulphur Creek, as soon as possible. If the Board demonstrates that the MUN use is not attainable in Sulphur Creek, and that use is removed, the CTR mercury criterion would not apply. However, until the Board removes it in accordance with 40 CFR 131.10(g), the MUN use applies and it appears that the analysis for Sulphur Creek does not show that applicable mercury water quality standard would be attained and maintained by the allocations in the TMDL. If the TMDL does not show that applicable water quality standards will be attained and maintained, the TMDL is not approvable.

Comment #4: Implementation Guidance

We concur with the language in the Staff Report at the end of section 4 (Water Quality Objectives) on page 41, concerning implementation guidance for fish tissue objectives, and with the language at section 5.1 (Aqueous Methylmercury Goals) on page 45, concerning future waste load allocations and implementation guidance. The scientific basis of the water quality objectives and TMDL allocation schemes is well founded on the most current science of how mercury operates in the aquatic environment.

Comment #5: TMDL Allocations

We support your proposed allocations in Tables IV-7 and IV-8 at pages 8 and 9 of the Staff Report, in percent of existing methylmercury loads (in grams per year); and we support your proposed explicit Margins of Safety for both the Cache Creek and Bear Creek allocations. We appreciate the scientific rigor and analyses used to support these allocations and the associated

annual average aqueous methylmercury concentrations for Cache Creek, Bear Creek and Harley Gulch. We note the revisions included in Appendix H.

In closing, we again commend you for your hard work on these particularly difficult mercury TMDL proposals. We are committed to working with the State to identify approaches that address our shared goals of accomplishing reductions of mercury levels in the water bodies while ensuring that legal requirements are met. We would be happy to meet with you to discuss these issues further. If you have any questions concerning these comments, please call me at 415 972-3480.

Sincerely,

/S/

Diane E. Fleck, P.E., Esq.
Water Division

cc: David Smith, US EPA
Doug Eberhardt, US EPA
Kathy Goforth, US EPA
Debra Denton, US EPA
Daniel Russell, US FWS

c: cache creek et al wqs tmdl comment letter.wpd